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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/025,821	12/26/2001	Satoshi Shinada	Q67781	4266

7590 07/25/2006

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EXAMINER
LIANG, LEONARD S

ART UNIT	PAPER NUMBER
2853	

DATE MAILED: 07/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/025,821	SHINADA ET AL.	
	Examiner	Art Unit	
	Leonard S. Liang	2853	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 July 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-60* is/are pending in the application.

4a) Of the above claim(s) *3,7,8,12,17-19,28-31,38 and 44-60* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1, 2, 4-6, 9-11, 13-16, 20-27, 32-37, and 39-43* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

Claim 33 is objected to because of the following informalities: Claim 33 currently states, "An ink cartridge…wherein the each…" This is not proper grammar. It will be construed that the claim should state "An ink cartridge…wherein each…" Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

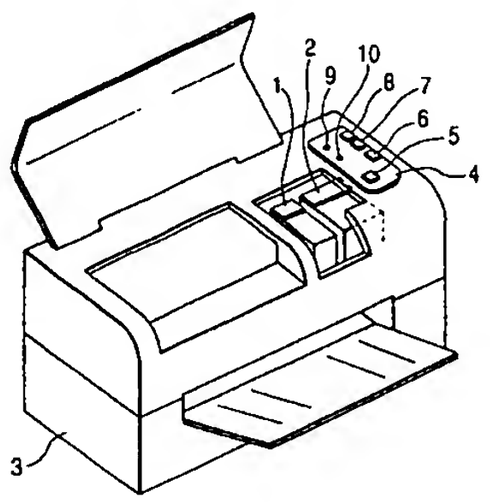
(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

2. Claims 1, 2, 4-6, 9-11, 13-16, 20-27, 32-37, and 39-43 are rejected under 35 U.S.C. 102(e) as being anticipated by Seino et al (US Pat 6361138).

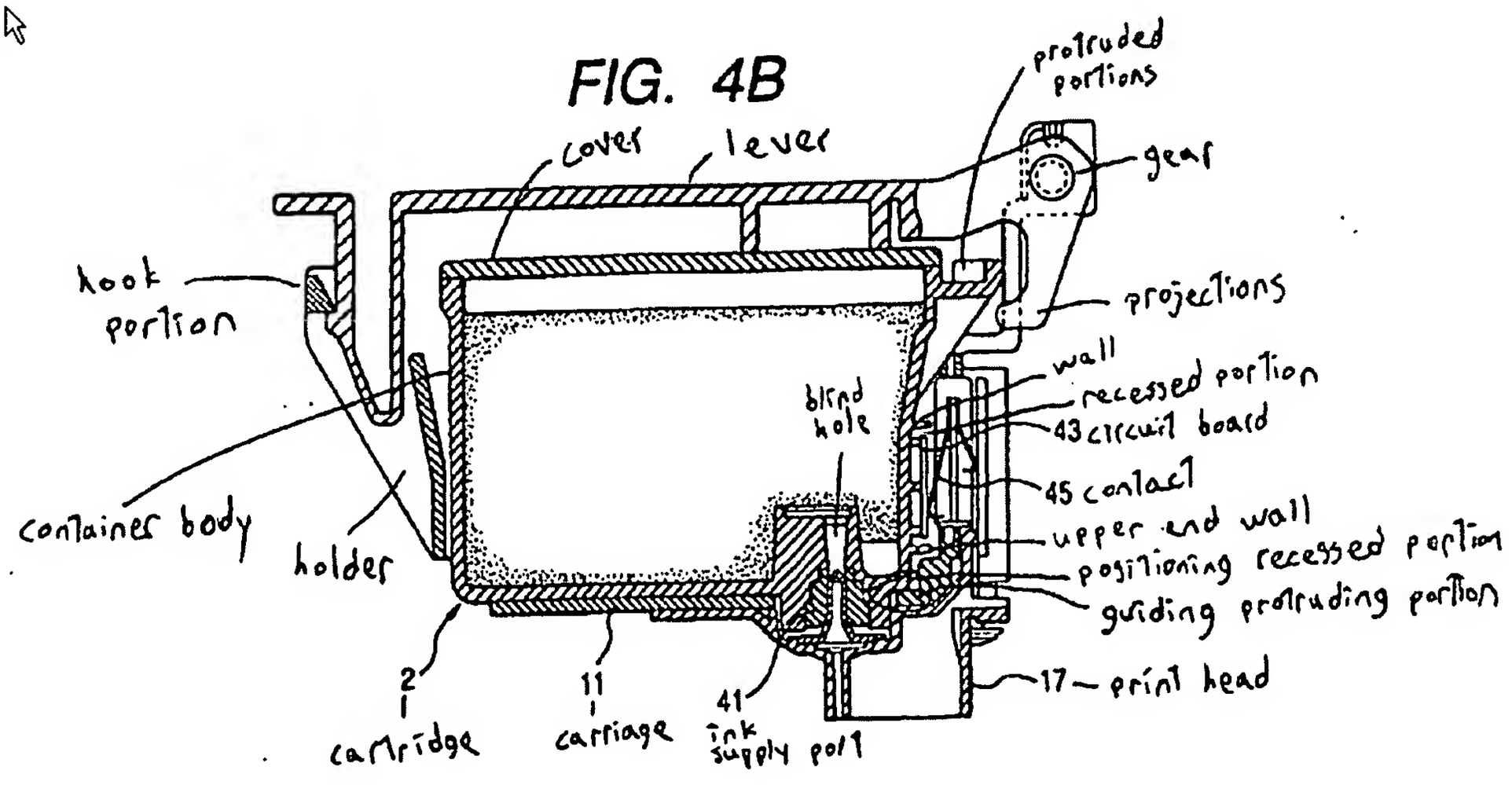
Seino et al discloses:

- {claim 1} An ink cartridge for an ink-jet recording apparatus (figure 1, references 1,2; figure 3B);

FIG. 1

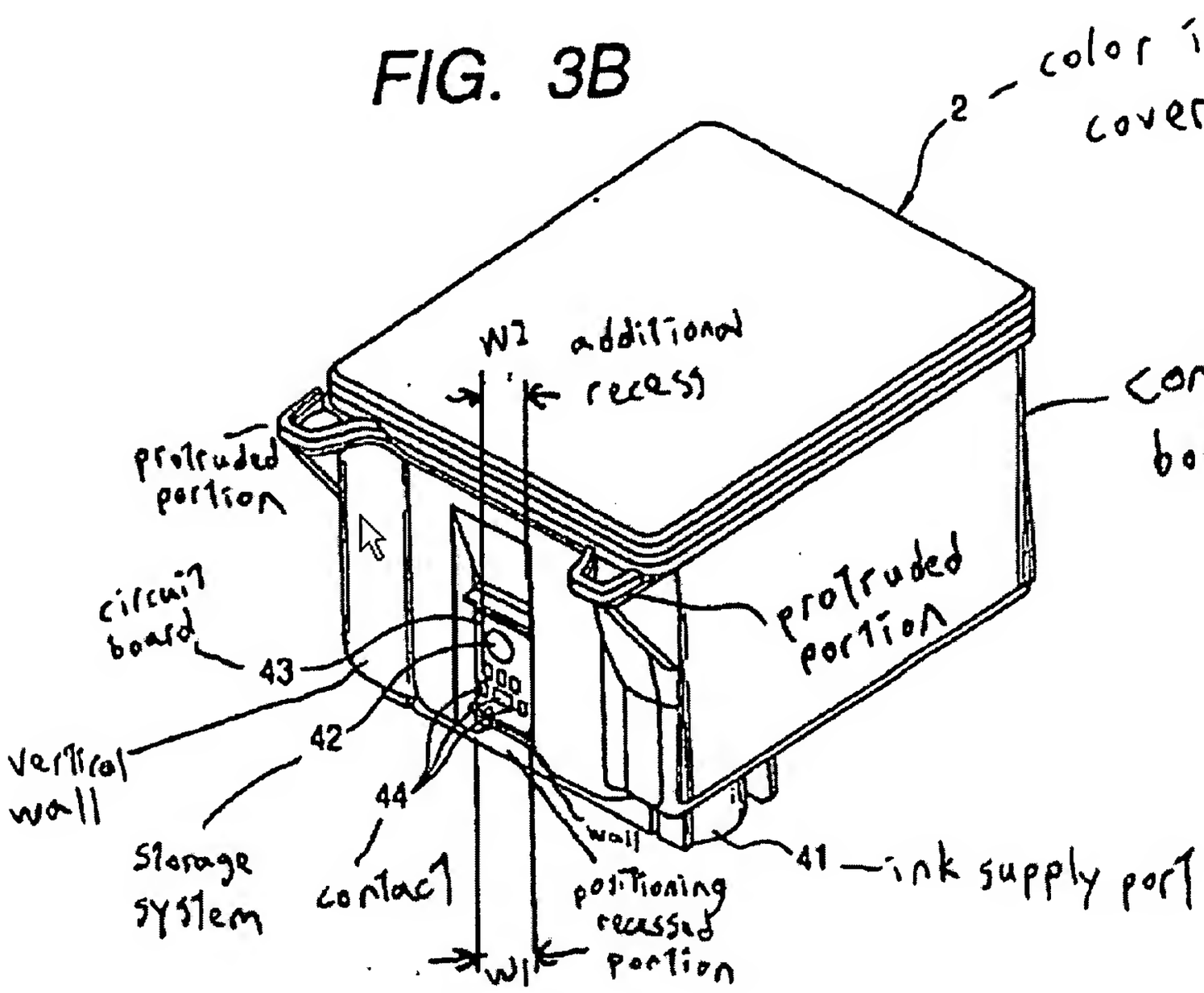


container body having an ink supply port (figure 3B, reference 41);



a storage element disposed on the container body (figure 3B, reference 42-44);

FIG. 3B



electrodes to be in contact with respective contacts provided in the recording apparatus accommodating the container body therein (figure 3B, reference 43-44; figure 4B, reference 43 and 45; contacts represent contact electrodes); a recess (see drawn-in positioning recessed portion) located between the ink supply port and the electrodes and is adapted to contact a protrusion (see drawn-in guiding protruding portion) of the recording apparatus to maintain the electrodes in contact with respective contacts (figure 4B, reference 43, 45; positioning recessed portion, guiding protruding portion, and ink supply needle are all drawn in and all serve as part of positioning system; contact point between positioning recessed portion and guiding protruding portion has been circled), wherein the recess

includes a first width along a carriage moving direction, the protrusion includes a second width along the carriage moving direction, the first width and the second width being substantially the same (naturally suggested in view of figure 4B and 3B) and recess receives the protrusion to align the electrodes with respective contacts in a carriage moving direction in a state in which the electrodes contact the contacts (figure 2, 4B, reference 11; it is clear that the positioning system shown in figure 4B is meant to be viewed in the context of a carriage moving direction as shown in figure 2)

- {claim 2} recess includes at least one recess that has an opening at a leading end thereof in an ink cartridge insertion direction, and that is engageable with the positioning member formed as a protrusion (figure 4B; positioning recessed portion, guiding protruding portion drawn in; it is seen that when the lever is lifted in a counter-clockwise direction around the gear, positioning recessed portion moves away from the guiding protruding portion; thus in the alternate direction, the recess is engageable with the positioning member; thus the claim is inherent to the invention)
- {claim 4} recess has an upper end wall to be contacted with an upper end of the protrusion (figure 4B; upper end wall drawn in)
- {claim 5} the wall extends in parallel to a direction in which the electrodes are arranged (figure 3B; wall drawn in between contact electrodes and positioning recessed portion; it is seen that the wall extends in parallel to a direction in which the electrodes are arranged)

- {claim 6} a contact area between the wall and the recess is wider than a width of an area in which the electrodes are arranged (figure 3B; the width of the area between the wall and the positioning member is [W1] and the width of the area in which the electrodes are arranged [W2] are drawn in; it is seen that W1>W2)
- {claim 9} an ink cartridge for an ink-jet recording apparatus, comprising: a container body having an ink supply port; electrodes; a storage element; and a positioning recessed portion open to the side where the ink supply port is provided, and receives a protruding portion formed in the recording apparatus to maintain the electrodes in contact with respective contacts (figures 3B and 4B; see drawn in references), the positioning recessed portion having a first width along a carriage moving direction, the protruding portion having a second width along the carriage moving direction, wherein the first width and the second width are substantially the same (naturally suggested in view of figure 3B and 4B), wherein the positioning recessed portion contacts the positioning member to align the electrodes with respective contacts in a carriage moving direction in a state in which the electrodes contact the contacts (figure 2, 4B, reference 11; it is clear that the positioning system shown in figure 4B is meant to be viewed in the context of a carriage moving direction as shown in figure 2)
- {claim 10} circuit board having the electrodes is accommodated in a recessed portion formed in the container body (figure 4B, references 43, 45)

- {claim 11} the positioning recessed portion is formed at a position below a circuit board having the electrodes (figure 4B, references 43, positioning recessed portion)
- {claim 13} the container body has a recessed portion for accommodating a circuit board having the electrodes, and has a wall which defines the recessed portion and is brought into contact with a top surface of the protruding portion (figure 4B, reference 43, 45, upper end wall, positioning recessed portion, guiding protruding portion)
- {claim 14} the wall extends in parallel to a direction in which the electrodes are arranged (figure 3B)
- {claim 15} a contact area between the wall and the protruding portion is wider than a width of an area where the electrodes are arranged (figure 3B)
- {claim 16} the storage element is mounted on a circuit board (figure 3B, references 42-43)
- {claim 20} the recess contacts the protrusion to further align the electrodes with respective contacts in one direction of a paper feeding direction, and a vertical direction in a state in which the electrodes contact the contacts (figure 4B, reference 43, 45; this is inherent when reference 43 is properly aligned with reference 45 due to the help of the positioning system)
- {claim 21} the positioning recessed portion contacts the positioning member to align the electrodes with respective contacts in one direction of a paper feeding direction, and a vertical direction in a state in which the electrodes contact the

contacts (figure 4B, reference 43, 45; this is inherent when reference 43 is properly aligned with reference 45 due to the help of the positioning system)

- {claim 22} the recess is located at an edge portion where a bottom wall formed with the ink supply port meets a side wall formed with the electrodes (figure 4B; see drawn in references)
- {claim 23} the recess extends from a bottom wall formed with the ink supply port to reach at least a lower end of a circuit board having the electrodes (figure 4B; see drawn in references)
- {claim 24} the recess extends from the bottom wall formed with the ink supply port to reach at least a lower end of a circuit board having the electrodes (figure 4B; see drawn in references)
- {claim 25} An ink cartridge for an ink-jet recording apparatus having a protrusion and contact electrodes (figure 3B-4B); a container body having an ink supply port (figure 3B, reference 41); a storage element associated with the container body (figure 3B, reference 42-44); a recess disposed at a bottom of the ink cartridge, having an opening along an insertion direction of the ink cartridge, wherein a width of the opening along a direction perpendicular to the insertion direction and parallel to a carriage moving direction is substantially equal to a width of the protrusion along the direction perpendicular to the insertion direction and parallel to the carriage moving direction (figure 3B, 4B; see drawn in refs); cartridge electronics disposed at a side of the ink cartridge, contacting respective contact electrodes provided in the recording apparatus accommodating the ink jet

cartridge therein (figure 3B, reference 42-44; figure 4B, reference 43, 45), wherein the recess contacts the protrusion to align the cartridge electrodes with respective contact electrodes in a carriage moving direction in a state in which the cartridge electrodes contact the contact electrodes (figure 2, 4B, reference 11; it is clear that the positioning system shown in figure 4B is meant to be viewed in the context of a carriage moving direction as shown in figure 2)

- {claim 26} the protrusion fitted into the recess fixedly maintains electrical contact between the cartridge electrodes and respective contact electrodes (figure 4B, reference 43, 45)
- {claim 27} wherein the cartridge electrodes are on a circuit board and the recess is disposed substantially on a centerline of the circuit board and the centerline of the circuit board is coincident with a centerline of the ink jet cartridge (figure 3B, 4B)
- {claim 32} An ink cartridge for an ink-jet recording apparatus (figure 1, reference 1,2; figure 3B); a container body having an ink supply port (figure 3B, reference 41); a storage element disposed on the container body (figure 3B, reference 42-44); electrodes to be in contact with respective contacts provided in the recording apparatus accommodating the container body therein (figure 3B, reference 43-44; figure 4B, reference 43, 45); a recess located proximate the electrodes and adapted to contact a protrusion of the recording apparatus to maintain the electrodes in contact with respective contacts along at least a carriage moving direction (figure 4B; drawn in references), wherein the recess

includes a first horizontal width along the carriage moving direction, the protrusion includes a second horizontal width along the carriage moving direction and the first width and the second width are substantially the same (naturally suggested in view of figures 3B and 4B)

- {claim 33} wherein each of the electrodes has a third horizontal width along the carriage moving direction substantially equal to or greater than a difference between the first horizontal width of the recess and the second horizontal width of the positioning member (figure 3B; the width of the contact 44 (which will be deemed the third horizontal width) is equal or greater than the difference between the first horizontal width of the recess (w1) and the second horizontal width of the protrusion (w2)
- {claim 34} wherein the first horizontal width is a distance between two vertical walls of the recess and the second horizontal distance is a distance between the two vertical walls of the protrusion (figure 3B; drawn in w1 and w2)
- {claim 35} a slit disposed behind the ink supply port and adapted to receive a projecting member of the recording apparatus, wherein the recess is disposed in front of the ink supply port (figure 4B, reference 41)
- {claim 36} a front retaining member disposed above the electrodes at a front side of the container body (figure 4B; drawn in projections)
- {claim 37} a back retaining member disposed at a back side of the container body (figure 4B; drawn in hook portion)

- {claim 39} wherein the carriage moving direction is perpendicular to a paper feeding direction and a cartridge insertion direction (figure 2)
- {claim 40} wherein the recess comprises a first sidewall and a second sidewall, the first sidewall opposes the second sidewall, and the protrusion is received in the recess (figure 3B, 4B)
- {claim 41} a slit disposed behind the ink supply port and adapted to receive a projecting member of the recording apparatus, wherein the recess is disposed in front of the ink supply port (figure 4B, reference 41)
- {claim 42} wherein the recess comprises a first sidewall and a second sidewall, the first sidewall opposes the second sidewall, and the protrusion is received in the recess (figure 3B, 4B)
- {claim 43} wherein the positioning recessed portion comprises a first sidewall and a second sidewall, the first sidewall opposes the second sidewall, and the protruding portion is received in the recess (figure 3B, 4B)

Response to Arguments

Applicant's arguments filed 07/10/06 have been fully considered but they are not persuasive.

The applicant's amendments do not put the application in condition for allowance. In light of the interview on 06/13/06, the applicants have not amended the claims in such a manner as recommended by the examiner. Specifically, the claims, as amended, still do not distinguish the inventive concepts of elected figure 10. Essentially, the main change that the applicant has

made is to replace the terms "positioning system" and "positioning member" with the terms "recess" and "protrusion". This change in terminology is not seen by the examiner to change the meaning of the claims in any way. The applicant has also added a limitation concerning the width of the recess (positioned along a carriage moving direction) as compared to the width of the protrusion (also positioned along a carriage moving direction). As shown in the rejection above, this is naturally suggested in view of figure 3B and 4B. As the examiner discussed in the interview, the invention of Seino et al is presumed to work. If the protrusion (guiding protruding portion) did not fit into the recess (positioning recessed portion) drawn in to figure 3B, the invention of Seino et al would not work. Furthermore, the examiner would once again like to point out how figure 3B of Seino et al is virtually identical to figure 1 of the applicant's figures, while figure 4B is virtually identical to figure 3 of the applicant's figures. Seino et al does not have a figure virtually identical to figure 2 of the applicant's figures (which does a good job of showing the width of positioning recessed portion 7). But given that figure 2 of the applicant's figures is merely a picture of figure 1 from a different angle and given that figure 3B of Seino et al is essentially the same figure as figure 1 of the applicant's figures, it is presumed that the width of the recess in figure 3B in Seino is similar to the width of the recess clearly shown in figure 2 of the applicant's figures. Although, figure 3B may not necessarily show perspectives that clearly indicate that the width of the protrusion and recess are substantially the same, that limitation is naturally suggested. It must be there or else Seino et al could not work and Seino et al is presumed to work. Again, the examiner encourages the applicant to amend the claims in such a way that they can claim the distinguishing characteristics of elected figure 10 as compared

to the figures shown in figure 3B and 4B of Seino. The examiner again also recommends the possibility of using exact numerical values to define the recess and protrusions.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leonard S. Liang whose telephone number is (571) 272-2148. The examiner can normally be reached on 8:30-5 Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

07/19/06
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STEPHEN MEIER
SUPERVISORY PATENT EXAMINER